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DATE: July 27, 2007

TO: Metro Council and interested parties

FROM: Kim Ellis, Principal Transportation Planner

SUBJECT: 2035 RTP Performance Measures Work Group – Next Steps

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PURPOSE

This memo summarizes next steps for continued development of the evaluation and monitoring framework for the 2035 Regional Transportation Plan (RTP). Attachment 1 summarizes the proposed framework.

ACTION REQUESTED

- No action requested. This item is informational.

COMMENTS RECEIVED TO DATE

Staff presented the proposed RTP performance evaluation and monitoring framework to the Metro Council and Metro's advisory committees in July. A summary of comments provided to date provides additional direction to the RTP performance work group:

- ✓ Overall support for creating a system for evaluation and on-going monitoring of the RTP.
- ✓ Gaps in current evaluation measures include: safety, trip not taken, system reliability, system completion, time lost in traffic and other per capita measures that are relevant to the individuals.
- ✓ Monitoring measures to consider: percent of budget spent on transportation, safety, asthma rates, childhood obesity, consumer satisfaction of transit choices and reliability.
- ✓ Targets will be an important part of the framework and the work group should consider existing benchmarks/targets as a starting point (e.g., Oregon Transportation Planning Rule vehicle miles traveled per capita, greenhouse gas reduction targets recommended at the state level and others).
- ✓ Include land use perspectives from the Metro Technical Advisory Committee (MTAC) in the work group.
- ✓ The work group should recommend how the framework should apply to local plans and direct future data collection efforts.

NEXT STEPS

A small work group of TPAC, MTAC, Metro staff and the consultant team will begin meeting in August to develop a recommendation on a full set of measures for the 2035 RTP by the end of the 2007. Participants identified to date include: Phil Selinger (TriMet), Ron Weinman (Clackamas County), Andy Back (Washington County), Lidwien Rahman (ODOT), Paul Smith (City of Portland), Terry Moore

(ECONorthwest) and Phill Worth (Kittelson and Associates). MTAC will be asked to identify additional participants at their August 1 meeting.

The performance measures work group will meet over the next several months to continue to refine the initial set of performance measures for future rounds of analysis to be conducted in 2008 during development of the state component of the 2035 RTP. The work group will also define a set of key measures and benchmarks that will be used to monitor implementation of the plan over time. This work will be integrated with work already underway with the Regional Freight and Goods Movement (RFGM) Technical Advisory Committee and (RFGM) Task Force.

RECOMMENDED PERFORMANCE MEASURES FOR EVALUATING THE FIRST ROUND OF ANALYSIS

	Indicator	Measure (change from 2005 base year to 2035)	Goals Addressed	Measured in 2000 RTP?
1	**Efficient access to daily needs**	**1.1** Average trip length	Goal 1: Efficient urban form, Goal 6: Human health and the environment	Yes
2	**Reduced reliance on driving to meet daily needs**	**2.1** Total vehicle miles traveled	Goal 1: Efficient urban form, Goal 5: Safety and security, Goal 6 Human health and the environment	Yes
		2.2 Vehicle miles traveled per person	Goal 1: Efficient urban form, Goal 5: Safety and security, Goal 6 Human health and the environment	Yes
3	**Viable travel options to meet daily needs and provide opportunities for physical activity**	**3.1** Transit riders per service hour	Goal 1: Efficient urban form, Goal 3: Transportation choices	Yes
		3.2 Percent of homes and jobs within ¼-mile of regional multi-use trail system	Goal 1: Efficient urban form, Goal 3: Transportation choices	No
		3.3 Percent of homes and jobs within ½-mile high capacity transit and ¼-mile frequent bus service	Goal 1: Efficient urban form, Goal 3: Transportation choices	Yes
		3.4 Non-auto person trips (miles)	Goal 3: Transportation choices, Goal 6 Human health and the environment	No
		3.5 Percent of trips by walking, biking, transit and shared ride (by 2040 land uses)	Goal 1: Efficient urban form, Goal 3: Transportation choices, Goal 6: Human health and the environment	Yes
4	**Accessibility to jobs and market areas**	**4.1** Travel times for selected links in the Congestion Management Process (CMP) network (PM 2-hr peak period and mid-day period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and goods	Yes
		4.2 Auto and transit travel time contours for central city and regional centers (PM 2-hr peak period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and goods	No
		4.3 Auto travel time contours for 2040 industrial areas and intermodal facilities (mid-day period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and goods	No
		4.4 Percent of homes and jobs within each travel time contour (PM 2-hr peak period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 3 Transportation choices	No
		4.5 Percent of homes within 30 minutes travel time of employment by auto and transit (PM 2-hr peak period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 3 Transportation choices	Yes

	Indicator	Measure (change from 2005 base year to 2035)	Goals Addressed	Measured in 2000 RTP?
5	**Reliability of regional and statewide passenger and goods movement**	**5.1** Multi-modal mobility corridor volume/capacity ratio (PM 2-hr peak period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 3: Transportation Choices, Goal 4 Reliable movement of people and goods	No
		5.2 Delay for main roadway routes on the regional freight network (mid-day period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and goods	Yes
		5.3 Volume/capacity ratio for main roadway routes on the regional freight network (mid-day period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and good	Yes
		5.4 Percent of lane miles of congestion by functional classification (PM 2-hr peak period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and goods	No
		5.5 Percent of delay by functional classification (PM 2-hr peak period)	Goal 2: Sustain economic competitiveness and prosperity, Goal 4 Reliable movement of people and goods	No
6	**Clean air**	**6.1** Tons per year of greenhouse gas emissions (e.g., carbon dioxide)	Goal 2: Sustain economic competitiveness, Goal 6: Human health and the environment	No
		6.2 Tons per year of particulates (PM 2.5) and air toxic pollutants released	Goal 2: Sustain economic competitiveness, Goal 6: Human health and the environment	Some
7	**Improve safety and security**	**7.1** Percent of Safety Priority Index System (SPIS) locations addressed	Goal 5: Safety and security	No
		7.2 Percent of regional bicycle and pedestrian systems completed	Goal 5: Safety and security	No
8	**Environmental stewardship**	**8.1** Acres of regionally significant Goal 5 resources impacted by new transportation infrastructure	Goal 6: Human health and the environment	No
		8.2 Acres of riparian and wildlife corridors impacted by new transportation infrastructure.	Goal 6: Human health and the environment	No
9	**Equity**	**9.1** Percent of environmental justice target area homes within 1/2-mile high capacity transit and ¼-mile frequent bus service	Goal 3: Transportation Choices	No
		9.2 Percent of environmental justice target area homes within ¼-mile of multiple regional transit service routes	Goal 3: Transportation Choices	No

For purposes of the evaluation, specific performance measures for the governance related goals (Goals 7, 8 and 9) are not recommended at this time because they do not meet the principles described in the previous section. Performance measures for these goals will be developed as part of the follow-on performance measures work group discussions.

Attachment 1

PERFORMANCE EVALUATION AND MONITORING FRAMEWORK FOR THE 2035 REGIONAL TRANSPORTATION PLAN

BACKGROUND AND CONTEXT

The RTP is the long-range blueprint for the transportation system serving the Portland metropolitan region. The plan deals with how best to move people and goods in and through the region and establishes the policy framework to guide the design, management and governance of investments in the region's transportation system for all forms of travel—motor vehicle, transit, bike, and pedestrian—and the movement of goods and freight.

The primary mission of the Regional Transportation Plan is to implement the Region 2040 vision for land use, transportation, the economy and the environment. As required under federal and state law, the RTP also serves as a long-range capital plan that will guide the public and private expenditure of billions of dollars from federal, state, regional and local revenue sources. The RTP serves this function by considering current and long-range transportation needs at a regional level and identifying policies, implementation strategies, programs and projects to meet those needs. The plans of local jurisdictions responsible for the transportation system in this region must be consistent with the RTP policies, implementation strategies, programs and projects. Furthermore, projects and programs must be included in the RTP financially constrained system to be eligible for federal and state funding programs.

Goals for the Regional Transportation System – Provisional Draft RTP Policy Framework

In June 2006, the Metro Council and the Joint Policy Advisory Committee on Transportation (JPACT) approved a work program and process to guide the current update to the Regional Transportation Plan (RTP). The work program calls for an outcomes-based approach to identify and prioritize transportation investments that are crucial to region's economy and that most effectively support the land use, economic, environmental and transportation goals embodied in the 2040 Growth Concept. Since approval of the work program, Metro conducted research on the current transportation system. [1] The research included:

- Analysis of current regional transportation system conditions, issues and policies, and relevant finance, land use, environmental, economic and demographic trends.
- Targeted public outreach through the website, Councilor and staff presentations to business and community groups, a series of stakeholder workshops to identify desired outcomes for the region's transportation system and issues to be addressed, and public opinion research.

The research findings guided development of a provisional draft RTP policy framework (*dated March 1, 2007*), which will in turn guide development and analysis of the rest of the 2035 RTP. The framework includes new policy direction to be used when identifying regional transportation needs and during the evaluation and prioritization of investments to the regional transportation system. The purpose of this updated framework is to sharpen the focus of the RTP on those transportation-related actions that most affect the implementation of the Region 2040 Growth Concept and will respond effectively to the powerful trends and challenges facing our region today.

The framework reflects the continued evolution of regional transportation planning from a primarily project-driven endeavor to one that is framed by the larger set of outcomes that affect people's everyday lives, commerce and the quality of life in this region. The goals, objectives and potential performance

[1] This research is summarized in a series of background papers and reports that are available to download from Metro's website at: http://www.metro-region.org/article.cfm?articleid=19896.

measures identified in the draft policy framework acknowledge the broader impacts of transportation on these outcomes. The framework includes nine goals that link transportation investments to Region 2040 goals for transportation, land use, the economy, and the environment, placing the highest priority on investments that reinforce Region 2040 and achieve multiple goals thereby maximizing the return on public investments in the transportation system. The nine goals are listed in **Table 1** for reference.

Table 1. Regional Transportation Plan Goals

System Design and Management
Goal 1 Efficient Urban Form Decisions about land use and multi-modal transportation infrastructure and services are linked to promote an efficient and compact urban form that fosters good community design and optimization of public investments; and supports jobs, schools, shopping, services, recreational opportunities and housing proximity.
Goal 2 Sustain Economic Competitiveness and Prosperity Multi-modal transportation infrastructure and services support a diverse, innovative, sustainable and growing regional and state economy through the reliable and efficient movement of people, freight, goods, services and information.
Goal 3 Transportation Choices Multi-modal transportation infrastructure and services provide all residents of the region with affordable and equitable access to affordable housing, jobs, services, shopping, educational, cultural and recreational opportunities, and all businesses of the region with competitive choices for goods movement.
Goal 4 Reliable Movement of People and Goods Multi-modal transportation infrastructure and services provide a seamless and well-connected system of throughways, arterials, freight systems, transit services and bicycle and pedestrian facilities to ensure effective mobility and reliable travel choices for people and goods movement.
Goal 5 Safety and Security Multi-modal transportation infrastructure and services are safe and secure for the public and goods movement.
Goal 6 Human Health and the Environment Multi-modal transportation infrastructure and services reduce greenhouse gas emissions and protect, restore and/or enhance the quality of human health, fish and wildlife habitats, and natural ecological systems.
Governance
Goal 7 Effective Public Involvement All major transportation decisions are open and transparent, and grounded in meaningful involvement and education of the public, including those traditionally under-represented, businesses, institutions, community groups and local, regional and state jurisdictions that own and operate the region's transportation system.
Goal 8 Fiscal Stewardship Regional transportation planning and investment decisions maximize the return on public investment in infrastructure, preserving past investments for the future, emphasizing management strategies and prioritizing investments that reinforce Region 2040 and achieve multiple goals.
Goal 9 Accountability The region's government, business, institutional and community leaders work together so the public experiences transportation services and infrastructure as a seamless, comprehensive system of transportation facilities and services that bridge institutional and fiscal barriers.

DEVELOPMENT OF AN OUTCOMES-BASED PERFORMANCE EVALUATION FRAMEWORK

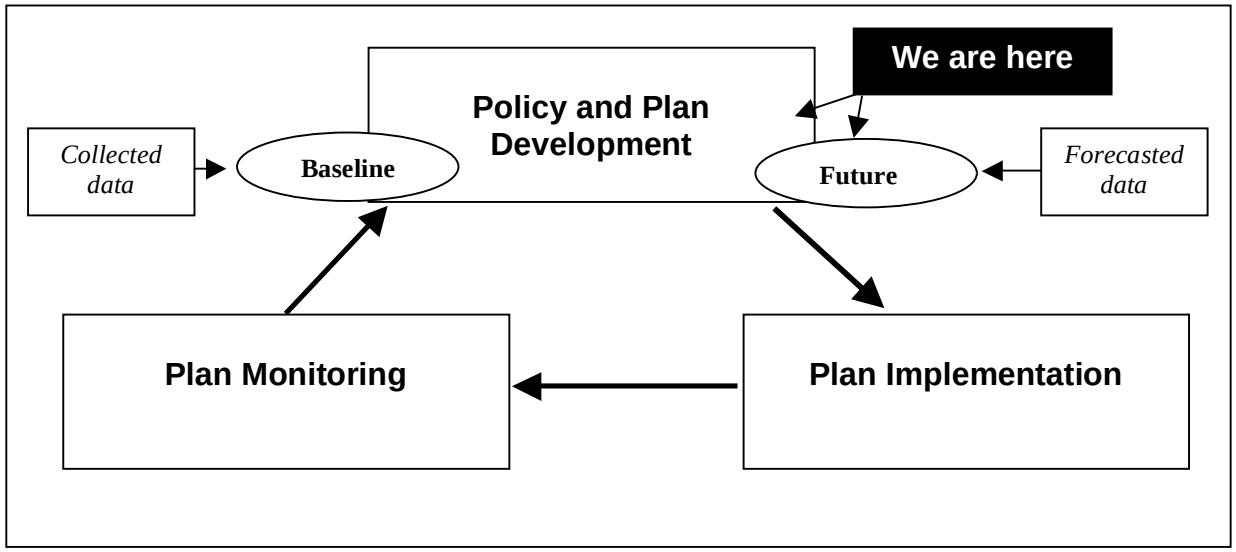
Performance evaluation is an important communication and reporting tool that can be used as an iterative feedback mechanism for setting and evaluating transportation policy and planning objectives and informing transportation investment actions and priorities. The evaluation and monitoring of system performance has long been a part of the development and implementation of previous RTPs. The application of a performance-based evaluation of transportation policy and planning objectives is a more recent trend in transportation planning, occurring since the last major update to the RTP in 2000.[2]

[2] This trend is documented in Transportation Research Board Conference Proceedings 36: Performance Measures to Improve Transportation Systems, August 22-24, 2004.

Defining the Concept of Performance Measurement – The Framework for Plan Development, Evaluation and Monitoring of the 2035 RTP

Performance management is a practical tool to link performance evaluation to policy development, evaluation and monitoring of the 2035 RTP. Use of performance measures that report on how transportation affects the daily activities of businesses and residents in the region inform decision-makers about how best to improve transportation services for all users of the regional transportation system and ensure effective implementation of the Region 2040 Growth Concept.

Figure 1. Regional Transportation Plan Performance Management System



The RTP will refer to the process of plan development, evaluation and monitoring over time as "performance management" as shown in **Figure 1**. Within this framework, the RTP will use "goal," "objective," "indicator," "performance measure," and "benchmark" to label the distinct elements of the outcomes-based performance management system developed for the RTP.

- A **goal** is a statement of purpose that describes long-term desired outcomes for the region's transportation system to support and implement the Region 2040 vision.

- An **objective** is similar to a goal as it also represents a desired outcome. However, an objective is an intermediate, shorter-term result that must be realized during the plan period to reach the longer-term goals of the RTP. An objective is measurable.

- An **indicator** is a categorical term for a particular feature of the transportation system that is tracked over time. Indicators are conceptual and qualitative and are tied to the policy framework's goals and objectives. Examples of indicators include access to jobs/access to market areas, reliability, mobility, travel options, equity, clean air and environmental stewardship. No single indicator provides a comprehensive evaluation of the transportation system. Instead, each indicator contributes a piece of information that, when considered with all other indicators, provides a complete picture of the transportation system's effectiveness, documenting how well the system of investments meet the RTP policy framework's goals for the regional transportation system. The indicators need to be translated into specific measures to be meaningful in the planning and decision-making process.

- A **performance measure** is a quantitative method of analysis used to evaluate the condition or status of an indicator to determine the degree of success a project or program has had in achieving

its stated goals and objectives. Some measures can be used to predict the future as part of an evaluation process using forecasted data, while other measures can be used to monitor changes of based on actual empirical or observed data. In both cases, they can be applied at a system level, corridor level and project level, and provide the planning process with a basis for evaluating alternatives, making decisions on future transportation investments and monitoring progress over time. Quantified results from performance measures can be compared to baseline data over time to track progress and to compare between different levels of transportation investments. Tracking progress against the goal or objective allows an assessment of the effectiveness of actions. This is very important for measuring improvement or maintenance of existing conditions. They can also be used to monitor performance of the plan in between updates to determine whether refinements to the policy framework, investment priorities or other plan elements are needed. Evaluation of investment alternatives for the 2035 RTP will occur using predictive data derived from Metro's regional travel forecast model and geographic informational systems (GIS) analysis.

- A **benchmark** is the expressed goal of the indicator, assigning a value to what the RTP is trying to achieve. Benchmarks (also known as targets) are expressed in quantitative terms and provide an important measure of progress toward achieving different goals within a timeframe specified for it to be achieved. Benchmarks will be developed for the state component of the 2035 RTP in 2008. Monitoring of the benchmarks would occur through periodic updates to the RTP and Metro's biennial Performance Indicators reporting using observed, empirical data.

APPLYING THE CONCEPT OF PERFORMANCE MEASUREMENT TO GOAL 6 OF THE PROVISIONAL RTP POLICY FRAMEWORK

It is helpful to apply these terms to the draft RTP policy framework for illustrative purposes. For example, **Goal** 6 in the policy framework calls for a transportation system that reduces greenhouse gas emissions and protects, restores and/or enhances the quality of human health, fish and wildlife habitats, and natural ecological systems. **Objective** 6.2 under Goal 6 calls for improving air quality so that human health is maintained and greenhouse gas emissions are reduced. **Indicators** to track whether investments in the transportation system will result in achieving this objective could be viable travel options or air quality. A **performance measure** could be percent of travel by walking, biking or transit to, from and within 2040 centers or tons of carbon dioxide or ozone emitted region-wide. A **benchmark** could be achievement of the RTP Non-SOV modal targets by the year 2040 or reducing greenhouse gas emissions 20 percent from today's level by the year 2035. Each level within the performance management framework represents different, yet interrelated levels of outcomes the RTP is trying to achieve – going from the very broadly defined desired outcome (a goal) to a very specific desired outcome (the benchmark).

Linking Performance Evaluation and Monitoring with the RTP Update Planning Process

The draft RTP policy framework emphasizes a system approach to maximize public investments in the transportation system when addressing the region's transportation needs and implementing the Region 2040 Growth Concept. The region is expected to grow by 1 million people in the next two decades. At the same time, the transportation system is aging and existing resources and sources of revenue are not keeping pace with our needs. To respond to these and other significant challenges facing the region, the 2035 RTP update broadens the evaluation of system performance to be more closely linked to the goals and objectives identified for the regional transportation system to monitor the effectiveness of a particular system of investments.

The provisional draft RTP policy framework lays out the region's goals for the transportation system and more than 50 ways to measure the region's progress in achieving the goals. The next step is to narrow the set of "potential performance measures" to a set of key measures that will be the focus of the first round of analysis conducted this summer. A performance measures work group will meet over the next several months to continue to refine the initial set of performance measures for future rounds of analysis to be

conducted in 2008 during development of the state component of the 2035 RTP. The work group will also recommend a set of key measures and benchmarks that will be used to monitor implementation of the plan over time.

The purpose of the system analysis to be conducted in summer of 2007 and spring of 2008 is to evaluate performance of different RTP systems and draw conclusions about how well different levels of investment meet the goals identified for the regional transportation system. Two levels of investment will be developed for the 2035 RTP. The first level, the *2035 RTP Financially Constrained System*, will represent the most critical transportation investments for the plan period.[3] The second level, the *2035 RTP Illustrative System*, will represent additional priority investments that would be considered for funding if new or expanded revenue sources are secured.[4] A parallel effort is underway to develop a finance strategy for the second level of RTP investments.

A small work group of TPAC members will begin meeting in July to develop a recommendation on a full set of measures for the 2035 RTP by the end of the 2007. The performance measures work group will meet over the next several months to continue to refine the initial set of performance measures for future rounds of analysis to be conducted in 2008 during development of the state component of the 2035 RTP. The work group will also define a set of key measures and benchmarks that will be used to monitor implementation of the plan over time. This work will be integrated with work already underway with the Regional Freight and Goods Movement (RFGM) Technical Advisory Committee and (RFGM) Task Force.

PRINCIPLES FOR SELECTING A KEY SET OF PERFORMANCE MEASURES FOR EVALUATION AND MONITORING OF THE 2035 RTP

The provisional draft RTP policy framework *(dated March 1, 2007)* contains a list of more than 50 potential performance measures that sometimes overlap and at times are ambiguous or difficult to measure. The following principles are recommended to guide identification of a set of key performance measures to conduct a system-level of analysis of RTP investments and actions and monitor implementation of the plan over time:

1. **The measures should reflect the underlying goals and objectives expressed in the policy framework; and should be relevant to and easily understood by the public, staff and elected officials.** This is particularly important so the measures can be meaningfully incorporated into the RTP decision-making process. The measures should be unambiguous and simple to present and interpret. The measures should also focus on the *results or outcomes* of our transportation investments that relate directly to traveler experiences and perceptions of the transportation system. By focusing on the results or outcomes we are trying to achieve and that are important to users of the system – JPACT, MPAC and the Metro Council can use this information to make choices about investment priorities. Use of relevant and easy to understand measures promotes transparency and accountability in the decision-making process and allows for more effective communication of the value of different investments in the transportation system to build understanding of and support for different types of investments. Effective communication with the public is also important as residents, businesses and other stakeholders want to know how priorities for investments in the transportation system are determined, and what benefits or improved services they will receive from increased investments in the transportation system.

[3] The 2035 Financially Constrained System will be the basis for findings of consistency with federal metropolitan transportation planning factors, the Clean Air Act and other planning provisions identified in SAFETEA-LU.

[4] The 2035 Illustrative System will be the basis for findings of consistency with the Statewide Planning Goal 12, the Oregon Transportation Planning Rule and the Oregon Transportation Plan and its components.

2. **A manageable number of measures should be created that provide value to the decision-making process.** A range of key measures should be identified to capture the state of the transportation system without being too large or unwieldy. When reported together, the measures should tell a compelling story that provides a scorecard of how well the system of investments satisfies the goals/desired outcomes identified for the regional transportation system. In addition, there should be an overall balance and flexibility among measures. It should be recognized that the combined set of measures contributes something to the overall evaluation of the transportation system and that all goals/desired outcomes included in the draft policy framework are equally important to evaluate. The measures should apply to multiple modes and be meaningful at a different scales and settings – such as the system, corridor and/or project level.

3. **Data should be accurate, relatively simple to collect, report and maintain.** The measures should be appropriate to the different types of decisions being made and data collection/analysis capabilities. Generally, data should not be too difficult or time consuming to collect or report. For *system evaluation*, the measures should be based on reliable forecast data and other data that can be gathered and updated on a periodic basis. Baseline and forecasted data for the analysis will be derived from Metro's Metroscope model, Metro's regional travel forecast model (regional model), created using EMME/2 transportation modeling software, and geographic informational systems (GIS) analysis to be conducted using Metro's Regional Land Information System (RLIS) and other available GIS data. For *monitoring implementation* of the RTP, data should be derived from collected data that can be gathered and updated on a periodic basis. For some measures, the availability of data or analysis capabilities may be limited. An important outcome of this process will be to identify follow-on work needed to further develop the RTP performance evaluation and monitoring process.

4. **The measures should assess specific impacts (positive and negative) of actions the RTP can influence.** The measures should assess the quality of the transportation services provided and the broader societal impacts that the transportation system has on our region. Previous RTPs have focused primarily on measuring congestion, thereby giving less attention to other goals identified in the plan during the decision-making process. The evaluation framework should provide sufficient information to allow the region to respond to what we learn, making refinements if needed.

Benefits of Performance-Based Evaluation and Monitoring

An outcomes-based plan requires careful monitoring to ensure that incremental decisions to implement the plan through land use decisions and corridor and project planning are consistent with the plan vision, as measured by specific outcomes. However, monitoring the effectiveness of transportation investments is challenging. System performance is the result of multiple factors, including land use, land supply, cost, availability of capacity and transportation options, and demand for travel. Despite being challenging, benefits of this approach to performance-based evaluation and monitoring include:

- Measurement of and feedback on the draft policy framework policies and investment priorities submitted by ODOT, TriMet and local agencies.
- Improved communication of needs and priorities, which is especially important given the limited resources available for funding.
- Informed decision-making.
- Increased transparency of the transportation analysis and decision-making process.
- Increased accountability through periodic reporting.

The final 2035 RTP will include a set of performance measures and benchmarks to examine and monitor the results of plan implementation over time. Performance-based management and monitoring of the RTP will continue to be used beyond the update to track progress of RTP implementation over time through

periodic updates to the plan and through Metro's biennial performance indicators reporting process. The measures serve as the dynamic link between RTP goals and plan implementation by providing a more formal process of evaluation and monitoring to ensure the RTP satisfies the regional goals for transportation, land use, the economy and the environment. Through evaluation and monitoring, the region can be sure that investments in the transportation system are achieving desired outcomes and getting the best return on public investments. Development of a performance management process also satisfies mandated benchmarks specified by the Oregon Transportation Planning Rule (TPR) and federal requirements to establish a performance monitoring system as part of the Congestion Management Process (CMP).